

Econ 1115: Principles of Macroeconomics

Lecture 2: PPC and Opportunity Costs

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What are the four factors of production?

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- Land

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- Labor

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- Land
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- Capital
- Entrepreneurship

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- Land - rent
- Labor - wages
- Capital - interest
- Entrepreneurs - profits

Classify the following factor inputs (more than one possible)

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- Oil drilling and refining plant.

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- The Northeastern library building.
- Oil drilling and refining plant.
- A high-school teacher teaching Algebra.

Outline

1 PPC

2 Trade

- Specialization
 - Absolute Advantage
 - Comparative Advantage

Production Possibilities Curves (PPC)

- Also called the PPF (Production Possibilities Frontier)
- Shows all the possible combinations of **two goods or services** that an economy (or individual or firm) can produce with the **given(fixed) amount of resources**.
- Current technology and full utilization of resources.

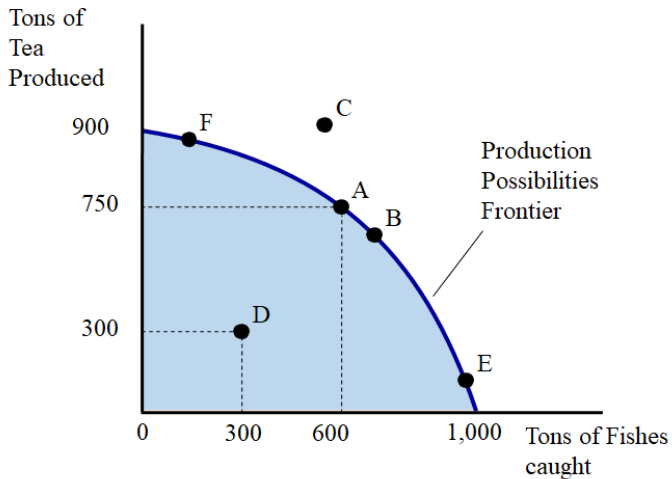


Figure: Production Possibilities Curve

We can also write this out in the form of a table.

Tea (tons/worker)	Fish (tons/worker)
0	1000
150	950
300	890
450	820
600	730
750	600
900	0

Opportunity cost is the cost in terms of the **best alternative** forgone.

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- If there are a 100 different alternatives, we only consider the second-best option
- Measures the trade-offs we face

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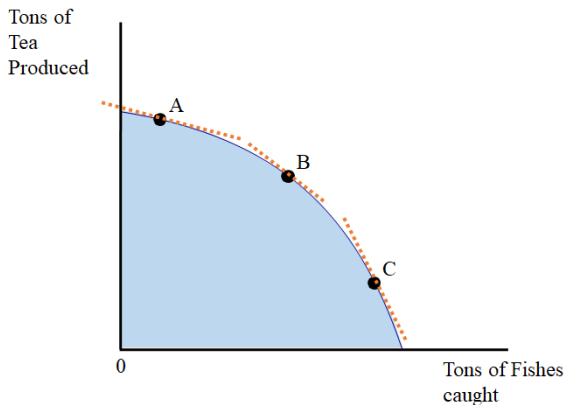
If she ends up buying \$5 worth of Hershey's bars, then what is her opportunity cost?

Example: Lynn has \$5 to spend on a couple of chocolate bars she wants to take with her on a bus ride back home . She usually prefers Galaxy bars over Bounty, but her favorite is the Hershey's chocolate bar.

If she ends up buying \$5 worth of Hershey's bars, then what is her opportunity cost?

If the store does not carry Hershey's bar and she chooses her next preferred option, then what is her opportunity cost now?

The slope of the PPC at each point is its opportunity cost.



Draw out the following PPC and complete the table

Tractors	Fidget spinners	Change in FS
0	100	
1	90	-10
2	75	
3	55	
4	30	
5	0	

Law of Increasing Opportunity Costs

Diminishing returns

The shape of the PPC is important.

- Concave to the origin

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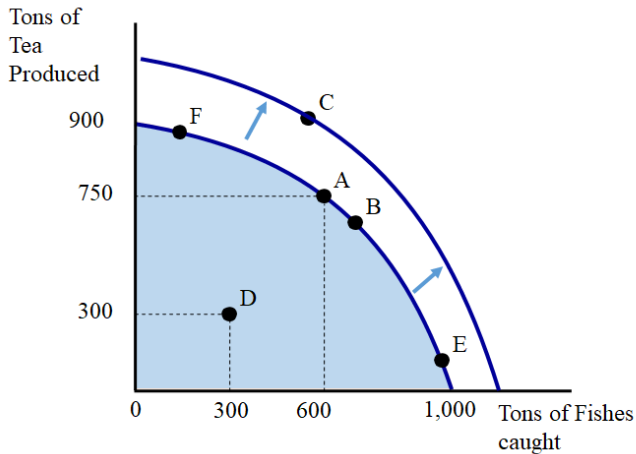
- Concave to the origin
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What would happen if the PPC was a straight line?

What does an outward shift of the PPC imply?



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That the country can produce more of one or both goods at the same time.

Why would this be?

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That the country can produce more of one or both goods at the same time.

Why would this be?

- Technological improvements
- Discovery of new resources

Economic Growth with PPCs

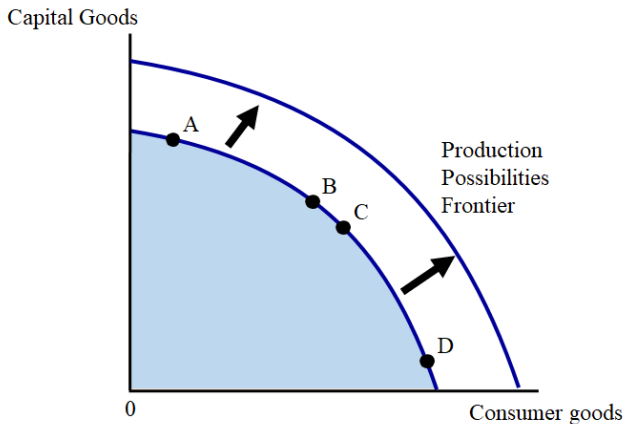
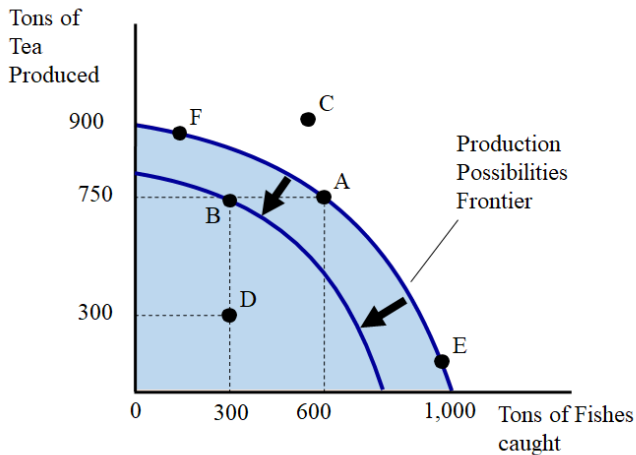


Figure: Production Possibilities Curve

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That the country can produce less of one or both goods.

Why would this happen?

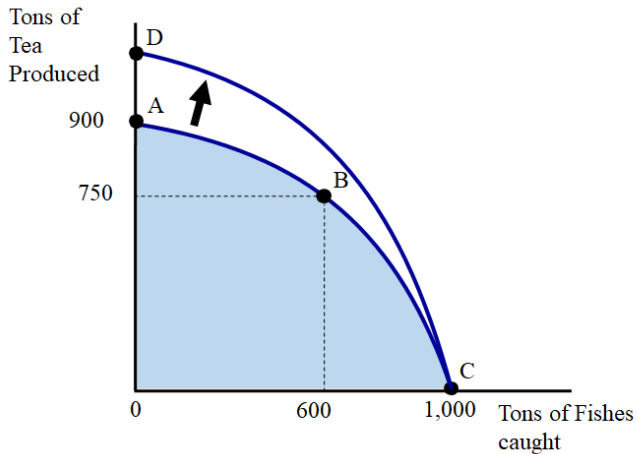
What does an inward shift of the PPC imply?

That the country can produce less of one or both goods.

Why would this happen?

- War
- Natural Disasters
- Declining Population

Can this happen?



Outline

1 PPC

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 - Comparative Advantage

Why do we trade?

Why do we trade?

Instead of farming our own crops, raising our own animals, sewing our own clothes, and writing our own books, why do we go buy clothes, groceries and books instead?

- Adam Smith
- Division of Labor and Specialization
- Efficiency and Productivity

Specialization = corner solutions on the PPC

- What does this mean?

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- What does this mean?
- Country only produces one good

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- What does this mean?
- Country only produces one good
- We will cover this in more detail when we come back to International Trade.

Absolute Advantage

An individual (or country) has an **absolute advantage** if he or she can produce a good using the fewest inputs.

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Example:

	Etsy bags	Trampolines
John	5	2
Quaid	3	4

Comparative Advantage

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Trade based on the principle of comparative advantage can still be beneficial to all. Example:

	Batteries	USB cables
Ava	10	4
Genevieve	2	2

An individual

- Can have absolute advantage in the production of both goods

An individual

- Can have absolute advantage in the production of both goods
- Cannot have a comparative advantage in both

Example problem: John and Helen are neighbors in a remote part of Australia and both can either choose to grow cotton or coffee.

	Cotton	Coffee	OC (cotton)	OC (coffee)
Jenny	10	2		
Aziz	2	1		